

# EXHIBIT A

USPN 10,135,682 (Previously Asserted) Issue Date: 11/20/2018		USPN 9,866,438 (New) Issue Date: 1/9/2018	
Claim	Claim Language	Claim	Claim Language
1.	<p>A method comprising:</p> <p>determining, by a cable modem termination system (CMTS), for each cable modem served by said CMTS, a corresponding signal-to-noise ratio (SNR) related metric;</p> <p>assigning, by said CMTS, each cable modem among a plurality of service groups based on a respective corresponding SNR-related metric;</p> <p>generating, by said CMTS for each one of said plurality of service groups, a composite SNR-related metric based at least in part on a worst-case SNR profile of said SNR-related metrics corresponding to said one of said plurality of service groups;</p> <p>selecting, by said CMTS, <u>one or</u> more physical layer communication parameter to be used for communicating with said one of said plurality of service groups based on said composite SNR-related metric; and</p> <p>communicating, by said CMTS, with one or more cable modems corresponding to said one of said plurality of service groups using said selected <u>one or</u> more physical layer communication parameter.</p>	1.	<p>A method comprising:</p> <p>determining, by a cable modem termination system (CMTS), for <u>a plurality of cable modems</u> served by said CMTS, a corresponding <u>plurality</u> of signal-to-noise ratio (SNR) related metrics;</p> <p>assigning, by said CMTS, <u>said plurality of cable modems</u> among a plurality of service groups based on said plurality of SNR-related metrics;</p> <p>generating, by said CMTS for each one of said plurality of service groups, a composite SNR-related metric based at least in part on a worst-case SNR profile of said <u>plurality of</u> SNR-related metrics corresponding to said one of said plurality of service groups;</p> <p>selecting, by said CMTS, physical layer communication parameters to be used for communicating with said one of said plurality of service groups based on said composite SNR-related metric; and</p> <p>communicating, by said CMTS, with <u>a portion of said plurality of cable modems</u> corresponding to said one of said plurality of service groups using said selected physical layer communication parameters.</p>
2.	The method of claim 1, wherein said one or more physical layer communication parameter includes one or more of: transmit power, receive sensitivity, timeslot duration, modulation type, modulation order, forward error correction (FEC) type, and FEC code rate.	2.	The method of claim 1, wherein said physical layer communication parameters include one or more of: transmit power, receive sensitivity, timeslot duration, modulation type, modulation order, forward error correction (FEC) type, and FEC code rate.
3.	The method of claim 1, wherein said CMTS uses orthogonal frequency division multiplexing (OFDM) over a	3.	The method of claim 1, wherein said CMTS uses orthogonal frequency division multiplexing (OFDM) over a

	plurality of subcarriers for said communicating.		plurality of subcarriers for said communicating.
4.	The method of claim 3, comprising selecting, by said CMTS, said one or more physical layer communication parameter on a per-OFDM-subcarrier basis.	4.	The method of claim 3, comprising selecting, by said CMTS, said physical layer communication parameters on a per-OFDM-subcarrier basis.
5.	The method of claim 4, wherein said one or more physical layer communication parameter includes one or both of: which of said OFDM subcarriers to use for transmission to said CMTS, and which of said OFDM subcarriers to use for reception of information from said CMTS	5.	The method of claim 4, wherein said physical layer communication parameters include one or both of: which of said OFDM subcarriers to use for transmission to said CMTS, and which of said OFDM subcarriers to use for reception of information from said CMTS.
		9.	<b><u>The method of claim 1, wherein said determining said plurality of SNR-related metrics comprises: transmitting a probe message to each said plurality of cable modems, said probe message comprising instructions for measuring a metric and reporting said measured metric back to said CMTS; and receiving a metric reporting message from each of said plurality of cable modems.</u></b>

USPN 9,210,362 (Previously Asserted) Issue Date: 12/8/2015		USPN 11,785,275 (New) Issue Date: 10/10/2023	
Claim	Claim Language	Claim	Claim Language
11.	<p>A method comprising:</p> <p>in a wideband receiver system:</p> <p>downconverting, by a mixer module of said wideband receiver system, a plurality of frequencies that comprises a plurality of desired television channels and a plurality of undesired television channels;</p> <p>digitizing, by a wideband analog-to-digital converter (ADC) module of said wideband receiver system, said plurality of frequencies comprising said plurality of desired television channels and said plurality of undesired television channels;</p> <p>selecting, by digital circuitry of said wideband receiver system, said plurality of desired television channels from said digitized plurality of frequencies; and</p> <p>outputting, by said digital circuitry of said wideband receiver system, said selected plurality of television channels to a demodulator as a digital datastream.</p>	1.	<p>A method for operating a television receiver, comprising:</p> <p>receiving, by an input terminal, an input signal comprising broadcast channels, the broadcast channels comprising a plurality of desired channels and a plurality of undesired channels, wherein the plurality of desired channels are non-contiguous;</p> <p>processing, by a radio front end coupled to the input terminal, the input signal to generate a processed input signal;</p> <p>digitizing, by an analog-to-digital converter (ADC) coupled to the radio front end, the processed input signal to generate a digitized signal;</p> <p>selecting, by a digital frontend (DFE) coupled to the ADC, the plurality of desired channels from the digitized signal; and</p> <p>outputting, by the DFE, the selected plurality of desired channels to at least one demodulator as a digital datastream, wherein the demodulator extracts information encoded in the digital datastream.</p>
12.	The method of claim 11, comprising outputting, by said digital circuitry of said wideband receiver system, said digital datastream via a serial interface.	2.	The method of claim 1, wherein the <b>DFE outputs</b> the digital datastream via a serial interface.
USPN 11,399,206 (Previously Asserted) Issue Date: 7/26/2022		USPN 11,785,275 (New) Issue Date: 10/10/2023	
Claim	Claim Language	Claim	Claim Language
23.	The method of claim 13, wherein: the method is performed by a device comprising a digital video recorder (DVR).	5.	The method of claim 1, wherein the extracted information is stored for use in a digital video recorder (DVR).
21.	The method of claim 13, wherein:	7.	

	the plurality of desired channels comprises at least one cable broadcast channel.%		The method of claim 1, wherein the plurality of desired channels comprises at least one <b>television</b> channel.
35.	The method of claim 25, wherein: the plurality of desired channels comprises at least one cable broadcast channel.		
48.	The method of claim 38, wherein: the plurality of desired channels comprises at least one cable broadcast channel.		
		8.	<b><u>The method of claim 1, wherein the plurality of undesired channels comprises at least one television channel.</u></b>
21.	The method of claim 13, wherein: the plurality of desired channels comprises at least one cable broadcast channel.	10.	The method of claim 1, wherein the broadcast channels comprise cable broadcast channels.
35.	The method of claim 25, wherein: the plurality of desired channels comprises at least one cable broadcast channel.		
48.	The method of claim 38, wherein: the plurality of desired channels comprises at least one cable broadcast channel.		
<b>USPN 11,381,866 (Previously Asserted) Issue Date: 7/5/2022</b>		<b>USPN 11,785,275 (New) Issue Date: 10/10/2023</b>	
<b>Claim</b>	<b>Claim Language</b>	<b>Claim</b>	<b>Claim Language</b>
27.	A cable television (TV) device comprising: a wideband analog-to-digital converter (ADC) configured to digitize a contiguous band of frequencies in an input signal, wherein the contiguous band of frequencies comprises a plurality of desired channels and a plurality of undesired channels; and a digital frontend (DFE) coupled to the wideband ADC, wherein the DFE is configured to concurrently select and provide each of the plurality of desired channels without providing any of the plurality of undesired channels, and wherein the cable TV device comprises a digital video recorder (DVR).	11.	A television receiver device, comprising: an input terminal operable to receive an input signal comprising broadcast channels, the broadcast channels comprising a plurality of desired channels and a plurality of undesired channels, wherein the plurality of desired channels are non-contiguous; a radio front end, coupled to the input terminal, operable to process the input signal; an analog-to-digital converter (ADC), coupled to the radio front end, operable to digitize the processed input signal to generate a digitized signal; and a digital frontend (DFE), coupled to the ADC, operable to select the plurality of desired channels from the digitized signal and output the selected plurality of

			desired channels to at least one demodulator as a digital datastream, wherein the demodulator is operable to extract information encoded in the digital datastream.
28.	The cable TV device of claim 27, wherein: the cable TV device comprises a cable network connector, and the input signal is operably communicated from the cable network connector to the wideband ADC via at least one of an analog amplifier and an analog filter.		
33.	The cable TV device of claim 27, wherein: the DFE comprises a plurality of digital demodulators, and each digital demodulator, of the plurality of digital demodulators, is operable to demodulate a desired channel, of the plurality of desired channels.		
36.	The cable TV device of claim 27, wherein: the DFE is operable to provide the plurality of desired channels via a serial interface.	12.	The television receiver device of claim 11, wherein the DFE is operable to output the digital datastream via a serial interface.
37.	The cable TV device of claim 27, wherein: the plurality of desired channels comprises at least one cable broadcast channel.	17.	The television receiver device of claim 11, wherein the plurality of desired channels comprises at least one television channel.
		15.	The television receiver device of claim 11, wherein the extracted information is stored for use in a digital video recorder (DVR).
		18.	The television receiver device of claim 11, wherein the plurality of undesired channels comprises at least one television channel.
		20.	The television receiver device of claim 11, wherein the broadcast channels comprise cable broadcast channels.